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FINANCING SOLID WASTE MANAGEMENT IN SMALL COMMUNITIES

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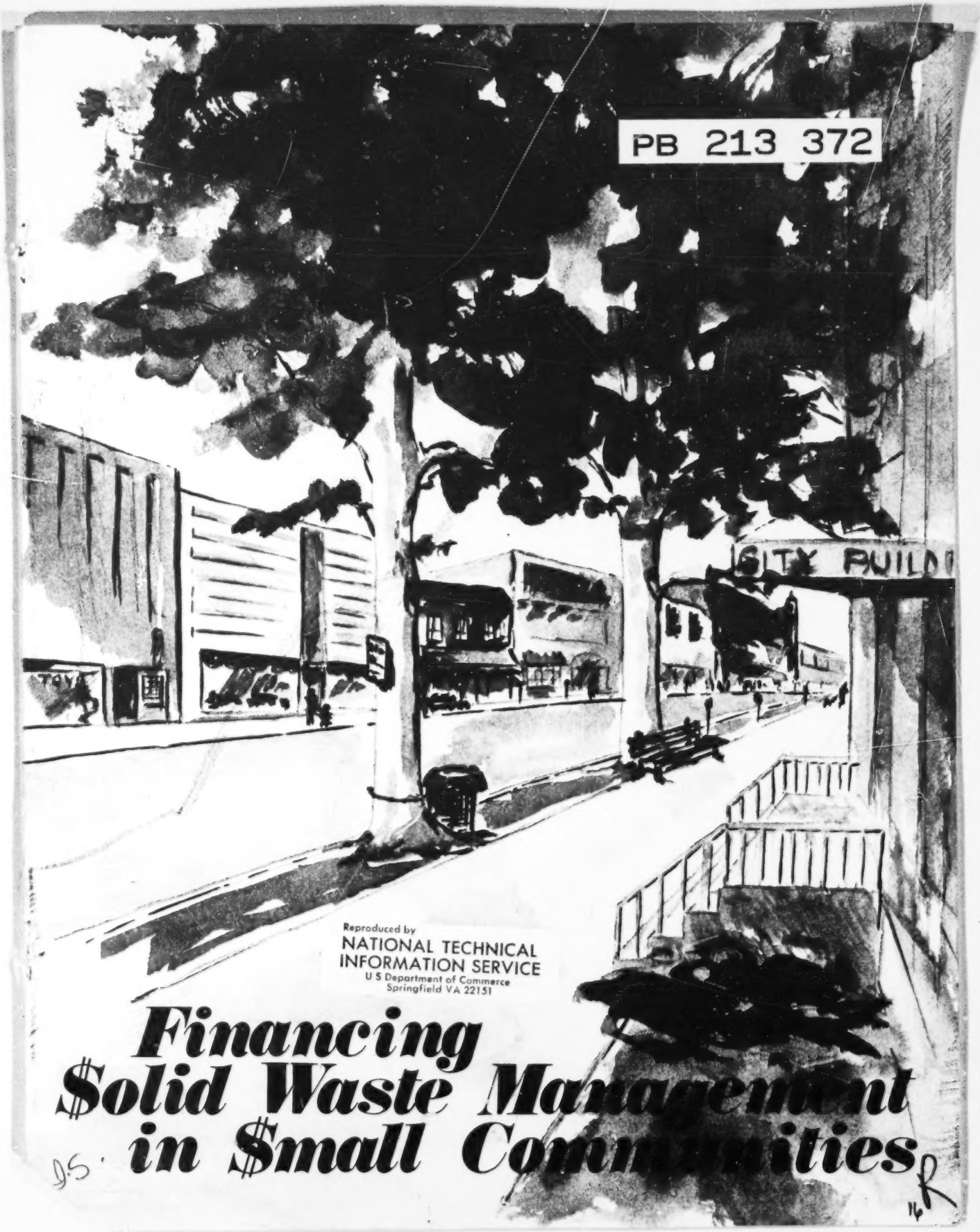

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FINANCING SOLID WASTE MANAGEMENT IN SMALL COMMUNITIES

This report (SW-57ts) was written by

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I

FINANCING SOLID WASTE MANAGEMENT IN SMALL COMMUNITIES

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The solid waste management problems of our urban areas are becoming recognized, and considerable effort is being made to design and implement better methods of waste management there. Their large size and many sources of funds facilitate the use of internally available managerial talent or outside consultants to aid in planning and decision making.

In some respects, however, the problems of the small community are even more pressing. In addition to technical problems, there are financial difficulties related to the acquisition of funds to construct and operate† facilities.

There are many reasons why small communities are having financial problems. Public demand for better service and more stringent legislation has greatly increased the need for more sophisticated and expensive waste handling facilities. This coupled with the competition for funds by numerous other sources (schools, police organizations, etc.) has resulted in an acute lack of funds to finance solid waste collection and disposal facilities. There are many financial techniques available, but their

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†The financial aspects of actual disposal operations are discussed in *An Accounting System for Solid Waste Management in Small Communities*, Public Health Service Publication No. 2035.

specific advantages or disadvantages to small communities must be made clear. Failure to do this can result in excessive costs or perhaps worse--failure to acquire the funds needed.

This paper will discuss the three major financing techniques (pay-as-you-go, leasing, and long-term borrowing) as they apply to small communities. More indirect methods, such as private contracting or grants utilization, may also partially solve problems but are not considered within the scope of this report.

Pay-As-You-Go

Since this is one of the most widely used and understood techniques available, only a brief discussion of its most salient features and limitations vis-a-vis small communities will be undertaken.

Although commonly labeled "pay-as-you-go," this technique is in reality "pay before you go." The funds required to finance new facilities must be accumulated before the installations are constructed. Regardless of whether a user charge or a general fund contribution is employed, the money must be accumulated from past operations. Herein lies one of this method's major drawbacks for the small community. To a large degree, the problems of financing a solid waste management system have developed rather suddenly, and accumulated funds for present and future needs may be nonexistent. Unfortunately, "pay-as-you-go" usually cannot be started today to buy needed facilities tomorrow. Herein lies the problem for many large cities. In many small communities, however, waste collection and disposal facilities are not really capital intensive. Sanitary landfill can be used rather than incineration. Similarly, large numbers

of packer and/or transfer trucks are not usually required. Therefore the capital requirements may not be large; and a readjustment or initiation of user charges to accumulate future replacement funds, in conjunction with an immediate influx of money from the general fund (to purchase equipment needed now) can succeed in making "pay-as-you-go" a viable technique. To keep the method self-supporting, however, several measures must be taken.

1. User charges must be periodically updated to offset increasing expenses and equipment needs.

2. The planning required to maintain the user charge system should be handled at the overall municipal management level, where adequate talent can be afforded. As an alternative, a consultant can be retained to perform the preliminary work and to effect periodic updatings.

3. If the administration of the user charge proves burdensome and expensive, the problem can be solved by having the fee appear on utility bills.

4. A strong and well documented public information campaign must precede any upward adjustments in user charge rates or general fund contributions. If this is not done, funds may be diverted to other municipal operations at the expense of solid waste management. By their nature, fire trucks or police cars are more attractive than garbage vehicles.

In small communities experiencing rapid increases in population or industrial growth (and consequently higher waste generation rates), the "pay-as-you-go" method may not prove practical. It forces present

citizenry to pay for facilities designed for future demands. If the waste generation surges, straight user charge financing may place a severe burden on the population. The people must then not only pay for their own operating costs but also quickly accumulate the funds needed for the construction of large and possibly expensive facilities. Under these circumstances, user charges may become too high, and other methods of financing would be more effective. In this case, general fund contributions or another form of financing can be used to pay for all or most of the initial costs. Future user charges can then support annual operating expenses and debt amortization.

Leasing

For the purposes of this paper, leasing and leasing with an option to buy will be considered together, even though they may differ with regard to contractual agreements, equity, contract life, and many other features (legal as well as practical).

Leasing is an external financing technique that can make the "pay-as-you-go" method workable. In effect, a facility is acquired now by a private firm, but municipal payments are postponed until after construction and are spread over an extended period. This technique is, therefore, particularly useful in financing expensive facilities when they are intended for use by future citizenry; they are too expensive to acquire outright; lack of time prohibits the accumulation of the funds required.

In addition to being a simple way of postponing and spreading cash requirements, leasing has other advantages for the small community.

The legal work involved is far less than that required to effect a bond issue, and voter approval is not usually needed prior to entering into a lease agreement. On the other hand, leasing is generally more expensive than long-term bond financing. This does not mean its use should not be considered--especially if municipal credit is poor or bonds are difficult or impossible to issue. Since annual costs are reduced if long-term leases are entered into, these should be sought if allowed by local or State statutes.

Leasing may also become more economical as private industry shows more interest and as competition increases. Many companies now lease their mobile equipment, and interested municipalities might investigate using this technique. In fact, the purchasing economies available through a large corporation might make the leasing of collection trucks more economical than purchase for a small municipality. In addition, new financing techniques may soon make economical leasing available for complex and expensive facilities as well. At least one company is currently offering municipalities this alternative.

If leasing is arranged with another nonprofit municipal agency, decreased borrowing costs and increased buying power may result. For instance, a central garage agency could finance the purchase of police cars, fire trucks, road maintenance equipment, and waste collection vehicles and lease them to the municipal operating agencies. The revenues from the leases could be used to meet interest and principal repayment for a revenue bond issue (as discussed below). Although not widely used, this financing technique can have application in certain situations that small communities may face.

Long-Term-Borrowing

Long-term borrowing is the final and most widely used method of financing capital outlays. More than 50 percent of all capital expenditures made by State and local governments in the last 10 years were financed through long-term borrowing. The two bond instruments currently in use are general obligation bonds and revenue bonds. Each has its advantages and disadvantages for small communities.

General obligation bonds are the most commonly used instrument. Because the full faith and credit of the issuing community are behind them, their resulting low risk makes interest costs less than for revenue bonds. A revenue bond pledges only that the income from specific operations will be used to meet interest and principal repayments. The possibility of default is, therefore, greater, and the interest rates are higher. General obligation bonds may occasionally be more expensive than comparable revenue bonds, but this situation is unlikely to occur in small communities for several reasons. First, the investing public knows very little about the facilities used in processing solid wastes, and they have not been financed with revenue bonds very often. This makes it difficult for the investor to determine the risk characteristics involved. This uncertainty can cause such bonds to carry high interest rates and face a poor market. Also, the feasibility study and other data required to issue a revenue bond tend to be difficult and expensive for a small community to obtain. The cost of obtaining this specialized information is largely independent of the size of the bond issue and is usually prohibitive for small communities with small revenue bond issues.

Conversely, the data required to issue a general obligation bond for solid waste facilities have probably been compiled to support general bond issues for schools, sewage treatment plants, etc. This information is usable virtually unchanged. Separate and detailed engineering analyses, which have high fixed costs, are not required to document a general obligation bond issue. For a small community going it alone, its fund requirements would, therefore, rarely be large enough to make revenue bond financing economical. If, however, practical or legal constraints prohibit the use of general obligation bonds, revenue bonds or perhaps leasing would have to be considered.

Several participating communities that form an authority to handle waste collection and disposal may be of sufficient size to utilize revenue bonds effectively. User charges paid by the participating communities would generate the income needed to meet revenue bond requirements. Or, as mentioned previously, a central garage or other combination of activities in one small municipality might be large enough to allow revenue bond financing.

Regardless of the bond instrument used, the interest rates of small communities exceed those of larger ones (Table 1). For example, depending on the bord rating, interest costs for communities of under 10,000 people in 1965 varied from 3.169 to 3.659 percent; in contrast, communities with between 10,000 and 250,000 residents incurred interest costs (depending on the bond rating) that varied between 3.093 and 3.501.

TABLE 1

AVERAGE ANNUAL INTEREST RATES ON BONDS IN SMALL- AND MEDIUM-SIZE MUNICIPALITIES IN 1965

Bond type	Average maturity 1-9 yrs		Average maturity 10-19 yrs	
	Under 10,000 population	10,000-250,000 population	Under 10,000 population	10,000-250,000 population
A	3.169	3.093	3.335	3.233
B*	3.376	3.184	3.503	3.386
Unrated	3.434	3.289	3.659	3.501

*Bonds rated Aaa, Aa, A, Baa, Ba,and B by Investment Bankers Association of America.

There are several reasons why small communities consistently face higher borrowing costs. Because they usually issue a small dollar volume of bonds at infrequent intervals, the relatively fixed overhead costs associated with preparing and marketing the issue result in higher costs per dollar issued. This is true for both bond instruments, but more pronounced with regard to revenue bonds. In addition, these small issues are unattractive to large investors because they are not easily traded and are usually not rated by major investment advisory services. Moody's Investor Service and Standard and Poor's do not rate issues if the size of the issuing community is below a certain level. Furthermore, Moody's does not rate bonds of a government subdivision unless its total debt outstanding exceeds $600,000; Standard and Poor's does not do so unless the figure is at least $1 million. The issues of many small communities are, therefore, never rated, regardless of their quality,

and this results in higher interest rates. The number of "A" and "B" rated and of unrated bonds issued by small- and medium-size communities between 1961 and 1965 clearly indicates that, on an average, over 50 percent of all issues offered by small municipalities were unrated, while only about 10 percent of those from medium size communities were not rated (Table 2).

TABLE 2

NUMBER OF ISSUES FOR SMALL AND LARGE COMMUNITIES (1961-1965)*

Year	Bond type	Under 10,000 population		10,000-250,000 population	
		Number of issues	Percent of total	Number of issues	Percent of total
1961	A	186	29	1086	46
	B	141	22	1137	47
	Unrated	322	49	153	7
1962	A	127	21	912	46
	B	125	21	889	45
	Unrated	361	58	146	9
1963	A	134	18	1018	44
	B	145	19	1135	49
	Unrated	481	63	144	7
1964	A	178	23	946	46
	B	144	19	918	44
	Unrated	448	58	197	10
1965	A	115	17	945	44
	B	125	18	959	45
	Unrated	440	65	225	11

*Source: Investment Bankers Association of America.

In addition to the factors mentioned, small communities usually do not have, and can rarely afford to hire, the talent needed to supply

detailed financial and legal advice. Many also fail to recognize the importance of hiring experienced consultants who know the intricacies of the bond market. This increases the chances of poor decisions and costly mistakes being made and results in higher borrowing costs.

With nowhere else to go, a small community may be forced to market its issue locally. This can be expensive for several reasons. There may be only a limited number of individuals whose income tax bracket is high enough to take advantage of the issue's tax exempt status. The yield must, therefore, be increased to make the issue more competitive with non-tax exempt issues which are attractive to less tax conscious investors. The supply of local funds may also vary widely and differ substantially from the national market. Poor timing can be very expensive when floating an issue in the local market.

Recommendations for Bond Issues

Long-term borrowing has its problems and resultant costs for small communities, but the technique will continue to be used. The following list of guides is presented, therefore, to help minimize excessive interest costs, obtain the best terms, and successfully market the issue.

1. Accurate financial, demographic, and economic data must be available to potential investors. The information should be routinely collected and clearly tabulated. The longer the period covered, the more readily an investor can ascertain the risks involved. It is usually a lack of information, not undesirable or poor data, that raises an investor's risk assessment. If no data are available, they should be

reconstructed from existing records and steps taken to assure that similar information is routinely collected.

2. A long-range financial plan should be formulated for the whole community as well as its solid-waste-related activities. Borrowing should be coordinated--fewer but larger issues can save money. Refinancing can also be cheaper if it is combined with a new issue, because fixed overhead costs will drop. In addition, a financial plan will allow adequate time to prepare issues for sale and to wait until market conditions are favorable.

3. The costs of marketing during unfavorable periods will be borne for the life of the issue. If the bond is tendered locally, the market there should be carefully compared to the national market. Large differences may warrant offering the issue elsewhere.

4. Favorable features of the community issuing the bond should be well publicized to offset adverse factors such as municipal size or the lack of a rating by bond services.

5. Experienced consultants should be employed. Financial and legal counsel can more than pay for itself in improved legal contracts, terms, rate setting, and marketing. If a revenue bond is to be issued, a really competent consulting engineer should be retained to make the feasibility study,because its acceptance by investors will be directly related to the consultant's stature in the field.

6. Utilize fully any free technical assistance available at State and Federal levels. The amount of technical assistance available in analyzing, selecting, and preparing bond issues varies from State to

State and should be determined in each instance. In some cases, a State review is required. Federal assistance has been available chiefly through the public facilities loan program, as amended in 1961. This program authorizes the establishment of a technical advisory service to assist in financial evaluations. The Office of Solid Waste Management Programs can also provide assistance in evaluating financing techniques and related problems.

7. Credit assistance programs should also be reviewed for their applicability. Under the facility loan program, the Department of Housing and Urban Development is authorized to purchase the securities and obligations of or make loans to cities, towns, and counties with less than 50,000 residents if they cannot secure credit at "reasonable terms and conditions" from private lending organizations. These loans can be made for up to 100 percent of the project's cost and up to 40 years duration. Loans can be made for a variety of public work projects, including water and sewer systems and possibly solid waste systems. The Farmers Home Administration (FHA) makes loans to public agencies and nonprofit corporations primarily serving rural areas to develop waste treatment systems. The FHA also offers assistance in assessing economic feasibility and financing techniques. In addition, the Economic Development Administration, Department of Commerce, is offering or will soon offer technical assistance in strengthening the bond issues of smaller communities.

Summary and Conclusions

Financing a solid waste management program in small communities is possible with one or more of the techniques discussed. Operating costs

are most easily met through general fund contributions or a direct user charge. The latter allows some freedom in setting rates and independence from other municipal operating requirements.

Selecting the financing technique most suited to capital expenditures is not as clear cut but is certainly the most critical part of the problem. The decision probably depends on the types of facilities required and the urgency and magnitude of the purchase. The small community does not need a large number of collection vehicles or much landfill equipment so it can probably accumulate money from user charges or the general fund. If this is not possible, leasing is a usable but possibly more expensive alternative.

On the other hand, when the facilities required are complex and relatively expensive, revenues from user charges or the general fund may not be adequate. This could be particularly true if there is insufficient time to plan for the accumulation of funds or if the facilities are to be large enough to meet future demands. In these cases, long-term borrowing may be the only practical alternative.

When long-term borrowing is necessary, the general obligation bond instrument is probably the easiest to prepare and market and the cheapest in terms of interest. The revenue bond has some advantages, but a small community rarely requires facilities large enough to make such financing economical. If a solid waste authority comprising several municipalities is utilized, revenue bond financing can be attractive.

There are other considerations which usually enter into the selection of a financing technique. Political as well as legal constraints may force

municipal officials to select certain methods over apparently more economical or desirable ones. For instance, a widespread dislike of user charges might force them to use general funds to operate solid waste collection and disposal facilities. In another instance, statutory limits on bond indebtedness might restrict the use of general obligation bonds. In fact, legal limits on interest rates might preclude bond financing entirely. Nonetheless, if long-term financing is anticipated, experienced consultants, technical assistance, and possibly credit assistance should all be fully utilized.

In conclusion, financing techniques are available and if flexibility is maintained and all options are objectively and professionally evaluated, a practical and economical financial plan can be designed and implemented. As a result, the funds needed to construct and operate good solid waste collection and disposal facilities can be obtained.

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